



May 19, 2011

Ex. 4 - CBI

Quantum Analytical & Environmental 824 Enterprise Street Dickson City, PA 18519

RE: Project: Ethylene Glycol

Pace Project No.: 3046709

Dear Ex. 4 - CBI

Enclosed are the analytical results for sample(s) received by the laboratory on May 14, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Timothy Reed for Rachel Christner rachel.christner@pacelabs.com Project Manager

**Enclosures** 

cc: | Ex. 4 - CBI | Quantum A/E Labs Inc.

**REPORT OF LABORATORY ANALYSIS** 

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# **CERTIFICATIONS**

Project: Ethylene Glycol Pace Project No.: 3046709

**Indiana Certification IDs** 

7726 Moller Road, Indianapolis, IN 46268
Illinois/NELAC Certification #: 100418
Indiana Certification #: C-49-06
Kansas Certification #: E-10247
Kentucky Certification #: 0042

Louisiana Certification #: 04076 Ohio VAP: CL0065 Pennsylvania: 68-00791 West Virginia Certification #: 330

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## **SAMPLE ANALYTE COUNT**

Project: Ethylene Glycol

Pace Project No.: 3046709

				<b>Analytes</b>		
Lab ID	Sample ID	Method	Analysts	Reported	Laboratory	_
3046709001	018-051211	EPA 8015 Modified	FRW	1	PASI-I	
3046709002	026-051211	EPA 8015 Modified	FRW	1	PASI-I	
3046709003	034-051211	EPA 8015 Modified	FRW	1	PASI-I	

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## **ANALYTICAL RESULTS**

Project:

Ethylene Glycol

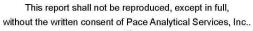
Pace Project No.: 3046709

Sample: 018-051211	Lab ID: 3046	6709001	Collected: 05/12	11 12:20	Received: 05	/14/11 10:03	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols	Analytical Meth	od: EPA 8	015 Modified					
Ethylene glycol	ND mg	ND mg/L 10.0 1		05/17/11 13:35 107-21-1				
Sample: 026-051211	Lab ID: 3046	6709002	Collected: 05/12	11 11:50	Received: 05	/14/11 10:03	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols	Analytical Meth	od: EPA 8	015 Modified					
Ethylene glycol	<b>14.2</b> mg	J/L	10.0	1	05/17/11 13:39 107-21-1			
Sample: 034-051211	Lab ID: 3046	3709003	Collected: 05/12	11 11:22	Received: 05	/14/11 10:03	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols	Analytical Meth	od: EPA 8	015 Modified					
Ethylene glycol	ND mg	ı/L	10.0	1		05/17/11 13:44	4 107-21-1	

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### **QUALITY CONTROL DATA**

Project:

Ethylene Glycol

Pace Project No.:

3046709

QC Batch:

WET/7712

Analysis Method:

EPA 8015 Modified

QC Batch Method:

EPA 8015 Modified

Analysis Description:

EPA 8015 Modified

Associated Lab Samples:

3046709001, 3046709002, 3046709003

METHOD BLANK: 572339

Matrix: Water 3046709001, 3046709002, 3046709003

Blank

Reporting

Associated Lab Samples: Parameter

Units

Units

Result

Limit Analyzed Qualifiers

Ethylene glycol

mg/L

Units

mg/L

ND

05/17/11 12:15 10.0

LABORATORY CONTROL SAMPLE:

Parameter

Parameter

572340

Spike Conc.

LCS Result

LCS % Rec % Rec Limits

Qualifiers

78-118 Ethylene glycol mg/L 276 299 108

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

572341

572342

MSD

MSD

MSD % Rec

% Rec

Qual

ND

MS 3046709001 Spike

Spike

MS Result Result 286

MS % Rec

Limits 103

Ethylene glycol

Result

Conc. 276

Conc. 276

290

102

51-135

**RPD** 1

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DIM0066706 DIM0066700



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#### **QUALIFIERS**

Project: Ethylene Glycol Pace Project No.: 3046709

### **DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

#### **LABORATORIES**

PASI-I Pace Analytical Services - Indianapolis

### **WORKORDER QUALIFIERS**

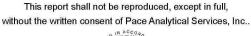
WO: 3046709

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[1] This project was revised on 5/19/11 in order to correct the results for Ethylene Glycol.

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# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Ethylene Glycol

Pace Project No.: 3046709

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3046709001	018-051211	EPA 8015 Modified	WET/7712	- 8 ia	
3046709002	026-051211	EPA 8015 Modified	WET/7712		
3046709003	034-051211	EPA 8015 Modified	WET/7712		

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